

## PATENT SPECIFICATION (1)

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## (54) APPARATUS FOR CLEANSING DRINKING GLASSES AND SIMILAR RECEPTACLES

(71) We, GASKELL & CHAMBERS LIMITED, a British Company, of Bensham Lane, Thornton Heath, Surrey, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention has as its object the provision of a simple but effective apparatus for use in restaurants, bars and similar establishments for the rapid and efficient cleansing of drinking glasses, beakers, mugs and similar receptacles, hereinafter referred to as "glasses".

According to the invention, apparatus for the purpose mentioned comprises a bowl, a hollow pillar in the bowl and means operable by the positioning of a glass over the pillar for creating jets of cleaning water from spray passages formed in the pillar and which jets are directed onto the inside of the positioned glass, said means comprising a central rod in the pillar, a mixing chamber at the base of the pillar, a valve actuated by downward movement of said rod for admitting water under pressure to the mixing chamber and thence to the interior of the pillar and to the spray passages, and a device in said chamber also operable by downward movement of the central rod for introducing a quantity of a detergent or other cleaning or antiseptic fluid into admixture with the water flowing through the mixing chamber.

In the preferred embodiment the apparatus comprises two bowls, in one of which the glass is cleaned with detergent solution and in the other is rinsed with clear water, and such an apparatus or unit will now be described in more detail with reference to the accompanying drawings in which:—

Fig. 1 is a diagrammatic, generally longitudinal, sectional view of the unit and

Fig. 2 is an inverted plan view with a cover plate removed to show conduit connections.

The unit shown comprises an elongated

bowl-like body structure 1 incorporating a hollow base 2 and having a throat portion at its mid-point such that the body forms effectively two part-circular side-by-side chambers 3, 4. At the centre of each chamber is a vertical pillar structure over which is positioned an inverted glass for treatment in the chamber, cleansing with detergent solution being carried out in the wash chamber 3 and rinsing in the rinse chamber 4. Referring first to the washing section, a hollow pillar 5 is mounted at its lower end on a valve housing 6 clamped to the base of the bowl, the pillar being formed at one or more points along its length with a series of outwardly-directed spray passages, one of which is shown at 7. Extending axially through the pillar is a central rod 8 carrying a button 9 on its upper end for engagement by a glass positioned over the pillar, the lower end of the rod extending into a chamber 10, formed in the housing 6 and referred to hereafter as the mixing chamber, and carrying a disc 11. Water under pressure, e.g. from the mains, is admitted via a conduit 12 to a connection 13 at the lower end of the housing 6, flow of water from this point into the mixing chamber being controlled by a spring-loaded inlet valve 14. The inlet valve has a stem 15 the upper end of which is located in close proximity to the disc 11, the arrangement being such that when the rod 8 is depressed by downward pressure of an inverted glass placed over the pillar, the disc engages the valve stem and opens the valve whereby water flows into the mixing chamber 10 and up the bore of the pillar, from which it is ejected through the spray passages 7 onto the inner side of the positioned glass.

Positioned to one side of the body is a container 16 for liquid detergent which flows via a conduit 17 to a connection 18 on the valve housing and then past a non-return valve indicated diagrammatically at 19 to a counterbore and extending into the mixing chamber is a hollow adaptor 21 the upper end of which is embraced by a corrugated

2

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2

rubber or like bellows 22, clamped at its upper end to the disc 11. Radial ports 23 extend through the wall of the adaptor 21 at points where they are shrouded by the bellows and when in use the interiors of the adaptor and the bellows are charged with detergent. Thus when the rod 8 is depressed the bellows is partially collapsed and detergent is forced out past the mouth of the bellows and into admixture with the water in the mixing chamber, whilst on the return stroke of the rod the bellows expand axially, detergent is drawn in through the ports 23 and further detergent is drawn into the adaptor/bellows assembly past the valve 19. The amount of detergent injected at each operation is determined by the degree of displacement of the rod 8 which can be regulated by an adjustable abutment 24 on the upper end of the rod limiting downward movement thereof.

Located around the upper end of the wash chamber is a spray tube 25 having downwardly and inwardly directed openings, said tube being fed from a vertical supply pipe 26 the lower end of which is connected by a conduit 27 to the mixing chamber 10. Thus each time detergent solution is sprayed over the inside of a positioned glass the exterior is similarly treated. In the preferred construction brushes are also used to augment the action of the cleansing liquid, the arrangement shown comprising a set of bristles 28 extending radially outwards from the pillar and including a dome-headed brush 29 on the upper end of the pillar, and a complementary brush mat 30 with its bristles extending radially inwards from the wall of the chamber, the bristles being sufficiently flexible to permit an inverted glass to be placed over the pillar and to be rotated manually relative to the bristles.

In the rinse chamber 4 there is again provided a hollow vertical pillar 31 mounted on a valve housing 32 having a connector 33 which is connected by conduit 34 to that part of the valve housing 6 in permanent communication with the mains supply conduit 12. The connector 33 opens into a passage 35 controlled by a spring-loaded valve 36, a central rod 37 in the bore of the pillar having a button 38 on its upper end for engagement by a glass placed over the pillar and being connected at its lower end to the valve 36 such that when the rod is depressed the valve is opened and water flows into a chamber 39. From this chamber the rinse water flows up the bore of the pillar and is ejected through spray passages 40 onto the inner side of the positioned glass. In this chamber also there is a spray tube 41 at the upper end for delivering rinse water onto the outside of the positioned glass, said tube being fed from a vertical supply pipe 42 connected at its lower end by a conduit 43 to a con-

necter 44 on the valve housing 32, this connector being in permanent communication with the chamber 39 so that the spray tube becomes operative each time the valve 36 is opened. This pillar 31 is of stepped formation with flexible rubber or like discs 45 provided on the steps, this arrangement having been found to assist in locating different size glasses on the pillar whilst guarding them against damage by rough handling.

The two cleaning chambers are provided at their bases with appropriate drainage means, for example, they could drain to a common outlet 46 to which could be attached, if desired, conduit means for conducting liquid to a drain.

#### WHAT WE CLAIM IS:—

1. Apparatus for cleaning drinking glasses and the like comprising a bowl, a hollow pillar in the bowl and means operable by the positioning of a glass over the pillar for creating jets of cleaning water from spray passages formed in the pillar and which jets are directed onto the inside of the positioned glass, said means comprising a central rod in the pillar, a mixing chamber at the base of the pillar, a valve actuated by downward movement of said rod for admitting water under pressure to the mixing chamber and thence to the interior of the pillar and to the spray passages, and a device in said chamber also operable by downward movement of the central rod for introducing a quantity of a detergent or other cleaning or antiseptic fluid into admixture with the water flowing through the mixing chamber.

2. Apparatus as claimed in Claim 1, including a spray tube around the upper end of the bowl from which jets of cleaning water are directed onto the outside of a glass positioned on the pillar, flow of water to the spray tube also being controlled by said valve.

3. Apparatus as claimed in Claim 1 or 2, including brushes mounted on the pillar and on the wall of the bowl and operable to augment cleaning of a positioned glass when rotated relative to the brushes.

4. Apparatus as claimed in any of the Claims 1—3, including a second bowl also provided with means operable by the insertion of a glass therein for creating jets of water onto the inside and outside of the glass and serving to rinse glasses cleaned in the first-mentioned bowl.

5. Apparatus as claimed in Claim 4, including a pillar in said second bowl over which a glass is positioned for rinsing, said pillar being of stepped formation and provided with flexible rubber or like discs on the steps as and for the purpose set forth.

6. Apparatus as claimed in Claim 4 or 5, wherein the two bowls are provided at their

3

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bases with drainage means connected to a  
common outlet.

7. Apparatus for cleaning drinking  
glasses and the like, substantially as herein  
5 described with reference to the accompany-  
ing drawings.

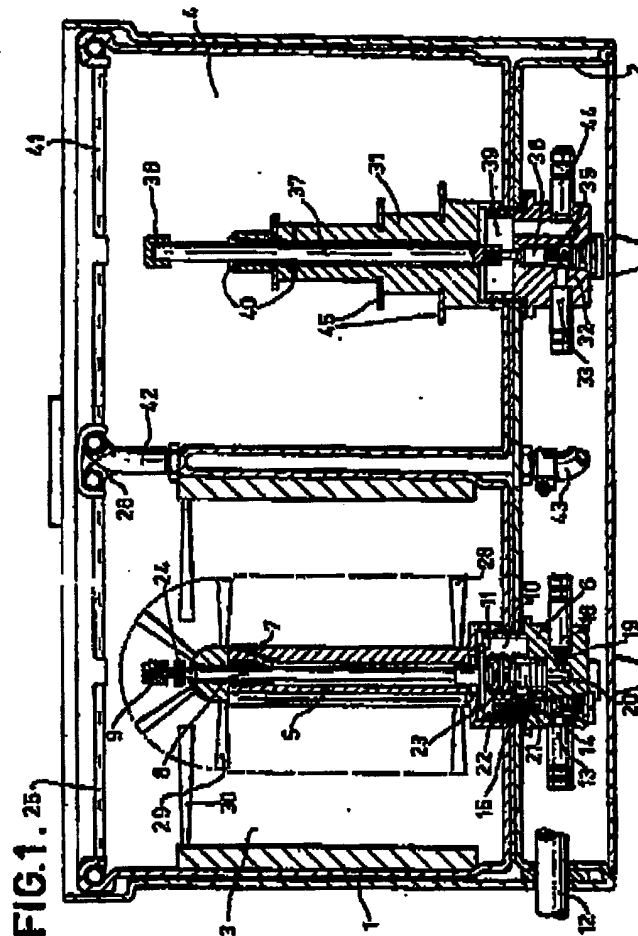
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Sheet 1



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## COMPLETE SPECIFICATION

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Sheet 2

